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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/658,227	09/08/2003	Woo Sik Yoo	M-15084 US	2698

7590 06/02/2004

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EXAMINER

FUQUA, SHAWNTINA T

ART UNIT	PAPER NUMBER
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3742

DATE MAILED: 06/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/658,227	YOO, WOO SIK	
	Examiner	Art Unit	
	Shawntina T. Fuqua	3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7,9-15 and 17-20 is/are rejected.
- 7) ☒ Claim(s) 8 and 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 1/20/04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3-5, 10, 12-13, 17, and 19-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Yoshikawa (US4989544).

Yoshikawa discloses an apparatus and method for heating a semiconductor substrate comprising a chamber (3) including a window (14), a radiation energy focusing assembly (19) in an optical path with window to focus radiation energy into window (column 8, lines 65-67; column 9, lines 3-7; Figure 2), focusing assembly is at a fixed distance from window (Figure 2), window is clear quartz (column 7, lines 38-39), focusing assembly is a Fresnel lens (19), and a reflector (17) proximate to energy source.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2, 6, 11, 14, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshikawa in view of Gat et al (US6717158).

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Yoshikawa discloses all of the recited subject matter except moving focusing assembly and energy source, and a plurality of lenses. Gat et al discloses moving focusing assembly and energy source (column 3, lines 24-37; column 9, lines 44-51), and a plurality of lenses (44, 46). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included moving the focusing assembly and energy source and a plurality of lenses as taught by Gat et al in the apparatus/method of Yoshikawa because, moving the focusing assembly and energy sources and a providing a plurality of lenses allows the substrate to be heated more uniformly.

5. Claims 7 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshikawa in view of Shao et al (US6437290).

Yoshikawa discloses all of the recited subject matter except cooling the lens via a flowing fluid. Shao et al discloses cooling the lens (column 15, lines 55-60). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included cooling the lens as taught by Shao et al in the apparatus/method of Yoshikawa because, cooling the lens prevents the lens from being damaged due to high temperatures.

6. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshikawa in view of Sheets (US4023904).

Yoshikawa discloses all of the recited subject matter except a radiation energy collector. Sheets discloses a radiation energy collector (column 1, lines 38-41). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the radiation energy collector of Sheets in the apparatus/method Yoshikawa because, a radiation energy collector allows the energy to be focused more efficiently.

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Allowable Subject Matter

7. Claims 8 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shawntina T. Fuqua whose telephone number is (703) 305-2581. The examiner can normally be reached on Monday-Friday 8-4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on (703) 305-5766. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

stf
May 29, 2004


Shawntina Fuqua
Patent Examiner
Art Unit 3742